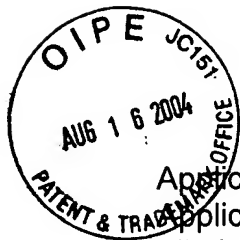


8/18/04

15W



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/717,218  
Applicant: : Roark  
Filed: : November 19, 2003  
Group Art Unit : 1724  
Examiner: : Spitzer, Robert H.  
Title: Dense, Layered Membranes for  
Hydrogen Separation

Confirmation No.: 6026

Docket No. : 63-03  
Customer No. : 23713

CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as Express Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 <u>EV 456,657 160 US</u>	
on <u>8/16/04</u>	<u>Lea Murray</u> Lea Murray

## SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

MAIL STOP AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

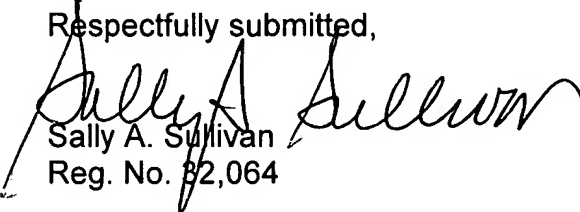
Further to the Supplemental Information Disclosure Statement filed May 7, 2004 and the Information Disclosure Statement filed April 23, 2004, the Examiner is respectfully requested to consider the additional references, copies enclosed, which may qualify as prior art. For the Examiner's Convenience, the references are listed on the attached Patent and Trademark Office Form PTO-1449.

Where a month of a reference is not listed, the year of publication is sufficiently earlier than the effective U.S. filing date so that the particular month of publication is not an issue.

This information is cited in a spirit of forthrightness and cooperation to enable the applicants to obtain that measure of protection for the invention to which there is entitlement. However, no representation is made that the listed art actually qualifies as prior art under the patent statute and the mere use of PTO-1449 is not an admission that all listed references are prior art. No representation is made that applicants know of the best art.

It is believed that this submission does not require the payment of any fees. If this is incorrect, however, please deduct the appropriate fee from deposit account 07-1969.

Respectfully submitted,

  
Sally A. Sullivan  
Reg. No. 82,064

GREENLEE, WINNER AND SULLIVAN, P.C.  
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Attorney Docket No. 63-03  
lem:August 10, 2004

AUG 16 2004

Sheet 1 of 2

Substitute for form 19/PTO, based on P. 371, SB/08A and 08B  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	Application Number	10/717,218
	Filing Date	November 19, 2003
	First Named Inventor	Roark
	Art Unit	1724
	Examiner Name	Spitzer, Robert H.
	Attorney Docket Number	63-03

### U.S. PATENT DOCUMENTS

Examiner Initial*	Cite No. <sup>1</sup>	Document Number (US-)	Publication Date (MM-DD-YYYY)	Name	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear (or entire document unless noted otherwise)
		3,246,450	04/19/66	Stern et al.	
		4,804,475	02/14/89	Sirinyan et al.	
		6,152,987	11/28/00	Ma et al.	
		6,187,157	02/13/01	Chen et al.	
		6,379,514	04/30/02	Schulte et al.	
		6,572,683	06/03/03	Yoshida et al.	
		6,641,647	11/04/03	Uemura et al.	
		6,649,559	11/18/03	Drost et al.	

### FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No. <sup>1</sup>	Foreign Patent Document Number (include WIPO country code)	Publication Date (MM-DD-YYYY)	Name	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear (or entire document unless noted otherwise)	T <sup>2</sup>

### NON-PATENT LITERATURE DOCUMENTS

Examiner Initial*	Cite No. <sup>1</sup>	REFERENCE Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Buxbaum, R.E. and Kinney, A.B. (1996), "Hydrogen Transport through Tubular Membranes of Palladium-Coated Tantalum and Niobium," Ind. Eng. Chem. Res. 35:530-537	
		Edlund, D.J. and Pledger, W.A. (1993), "Thermolysis of hydrogen sulfide in a metal-membrane reactor," J. Membr. Sci. 77:255-264	
		Hara, S. et al. (July 2002), "Hydrogen permeation through palladium-coated amorphous Zr-M-Ni (M = Ti, Hf) alloy membranes," Desalination 144:115-120	
		Moss, T.S. et al. (1998), "Multilayer Metal Membranes for Hydrogen Separation," Int. J. Hydrogen Energy 23(2):99-106	
		Nishimura, C. et al. (1994), "Hydrogen permeation characteristics of vanadium-molybdenum alloys," Trans. Mat. Res. Soc. Jpn. 18B:1273-1276	
		Nishimura, C. et al. (1999), "Hydrogen permeation through magnesium," J. Alloys Compounds 293-295:329-333	

Examiner Signature	Date Considered
--------------------	-----------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional).

<sup>2</sup>Applicant is to place a check mark here or "x" if English language Translation is attached.

<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>	Substitute for form 1449/PTO, based on PTO/SB/08A and 08B	Application Number	10/738,454
		Filing Date	12/16/2003
		First Named Inventor	WITTRUP et al.
		Art Unit	1645
		Examiner Name	Not assigned
		Attorney Docket Number	97-99E

REFERENCE			
Examiner Initial*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
		Ozaki, T. et al. (March 2002), "Preparation of palladium-coated V and V-15Ni membranes for hydrogen purification by electroless plating technique," Int. J. Hydrogen Energy 28:297-302	
		Ozaki, T. et al. (Nov. 2003), "Hydrogen permeation characteristics of V-Ni-Al alloys," Int. J. Hydrogen Energy 28:1229-1235	

Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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